

Appl. No. 10/735,613
Amendment dated: April 4, 2006
Reply to OA of: November 7, 2005

REMARKS

This is in response to the Official Action of November 7, 2005. Applicants submit herewith a Supplemental Amendment in order to more precisely define the scope of the present invention, taking into consideration the outstanding Official Action. Applicants respectfully request that this Supplemental Amendment be entered and considered by the Examiner in charged of the instant application since the Amendment filed March 7, 2006 was submitted before Applicants received the Advisory Action that was mailed on March 6, 2006. The Advisory Action presents comments which Applicants wish to address by the amendments made to the claims herein and the following comments.

Applicants have amended claim 6 to recite that the permanent magnet ring consists of unit permanent magnets. Support for this amendment can be found throughout the specification as originally filed, including, e.g., all of the Figures of the originally filed specification. The Figures of the originally filed application clearly illustrate that the magnet permanent ring is made up of only unit permanent magnets, with no exterior casing or plastic shell. Accordingly, Applicants respectfully submit that all claims now pending in the present application are in full compliance with the requirements of 35 U.S.C. §112 and are clearly patentable over the references of record.

In an Advisory Action mailed March 6, 2006, it is urged that the claims of the of the instant application do not require that the spherical magnet consist of the rare earth magnetic material. The Advisory Action takes the position that the teaching in Sakurai of a magnet encased in a non-magnetic material discloses the invention as claimed in the instant application because of the open claim language used in the claims. Applicants respectfully traverse this position in light of the amendments to the claims made herein.

With respect to Figure 1 of Sakurai, Applicants note that a "cylindrical strong magnetism magnet 2 is put in and created in the nonmagnetic matter 1 as a structure of a ball." The nonmagnetic material 1 is formed in a spherical shape with an insertion

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hole, and the magnet 2 is inserted into the hole. Figure 2 also clearly illustrates this feature of the invention. The nonmagnetic material 1 is in the shape of a sphere and has an insertion hole 3 for providing a magnet 4 therein. Thus, as shown in Figure 2, the only portion of the magnet that remains exposed to the outside environment after being inserted into the nonmagnetic material is the portion that is at the insertion hole entrances.

To the contrary, the amended claims of the present application clearly recite that the permanent magnet ring consists of unit permanent magnets. The transitional phrase "consisting of" excludes any element, step, or ingredient not specified in the claim. *In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). Accordingly, the disclosure of Sakurai clearly fails to disclose the present invention as claimed because the Sakurai reference discloses a permanent magnet ring that is a combination of both non-magnetic material 1 and the magnet 2 or 4. Each ball of the Sakurai invention fails to have the external appearance of one complete ball as in the instant invention because a boundary line exists at the point where the magnet is inserted into the non-magnetic material. This configuration not only causes the composite balls in the Sakurai to look poor in appearance, but the complicated structure is also more expensive to produce due to increased man-hours required for manufacturing.

Other disadvantages exist when comparing the invention claimed in the present application and the invention disclosed in Sakurai. Since the ball in Sakurai comprises two materials, the two materials wear at different rates over the course of extended use and the surface may become uneven. Such non-uniform wear will cause the magnetic strength between the balls to be decreased.

Accordingly, the invention of the instant application is claimed such that the permanent magnet ring consists of only unit permanent magnets. Such a configuration avoids the disadvantages of the Sakurai invention and further distinguishes the claimed invention from the Sakurai invention. The presently claimed invention is more easily

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manufactured, costs less to produce and does not encounter uneven wear that can lead to reduced magnetic attraction.

In light of the above comments, Applicants respectfully submit that Sakurai fails to either disclose or suggest every element of the presently amended claims and is therefore incapable of properly supporting either a §102 or §103 rejection. Therefore, Applicants respectfully submit that the presently amended claims are clearly patentable over the Sakurai reference.

The Advisory Action also urges that Sakurai explicitly teaches solid spherical magnets as suitable embodiments, and refers to Figure 3a in support of this position. Applicants specifically traverse that this portion of Sakurai discloses or suggests the presently amended claims.

First, Applicants note that Figure 3a appears to illustrate a solid spherical magnet used in conjunction with the composite magnet balls illustrated in Figure 1 and 2 and discussed in detail above. To the contrary, and as discussed above, the presently amended claims recite that the permanent magnet ring consists of only unit permanent magnets. That is to say, the present invention does not claim the use of some unit permanent magnets and some composite magnet balls. Rather, the presently amended claims clearly recite that the entire permanent magnet ring consists of only unit permanent magnets. Accordingly, Applicants respectfully submit that the teaching of a solid spherical magnet in conjunction with composite magnet balls fails to disclose or suggest the presently claimed invention.

Further, Applicants note that the Sakurai reference discloses that the use of nonmagnetic matter 1 to encase the magnet 2 is important to the invention disclosed therein because, "if the magnet 2 is put into the interior of the nonmagnetic matter and it covers, a magnet 2 will not appear from the outside but its esthetic property will increase." In fact, the Sakurai reference acknowledges this as an advantage of the invention, since various color combinations can be made by using different colored non-magnetic materials to encase the magnet. Accordingly, Applicants respectfully submit that the Sakurai reference would teach away from the use of only solid spherical

magnets since this would frustrate one of the objectives of the Sakurai invention. Without using the composite magnetic balls that can come in different colors and designs, the bracelet disclosed in Sakurai would not be capable of different color combinations that are esthetically pleasing. In light of these comments, Applicants respectfully submit that the Sakurai fails to disclose or suggest the presently claimed invention and is therefore incapable of properly supporting either a §102 or a §103 rejection. Applicants therefore respectfully submit that the presently amended claims are patentable over the Sakurai reference.

Finally, while Figure 3a of Sakurai illustrates a spherical magnet, Figure 3a shows only that spherical magnets are attracted magnetically to each other. This figure and the related description fail to disclose the claimed feature of unit permanent magnets that are uniaxial anisotropic magnets in which an N pole or an S pole is formed on one part of the side surface orthogonal to an easily magnetizing direction, which is formed at a time of molding a raw material including a rare earth element in a magnetic field, by magnetizing along said easily magnetizing direction after sintering, and the S pole or the N pole is formed on another part of the side surface opposite to said one part of the side surface, the side surface, on which the magnetic poles of the unit permanent magnet are formed, is formed to be a curved surface, and a predetermined number of the unit permanent magnets, which are the uniaxial anisotropic magnets, are magnetically attracted to each other in a line contact aspect or a point contact aspect on the curved side surfaces on which the magnetic poles are formed, so as to be formed in a ring shape having a predetermined size.

The subject matter shown in Figure 3a of the invention by Sakurai is only the structure described in the first part of claim 6 of the present application, i.e., a permanent magnet ring formed by arranging a plurality of unit permanent magnets, wherein the permanent magnet ring consists of unit permanent magnets, wherein each of the unit permanent magnets is formed in a cylindrical shape, a spherical shape, a flat shape, or a disc shape, and a predetermined number of the unit permanent magnets are magnetically attracted to each other on respective side surfaces so as to be formed

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in a ring shape. A strong magnet can be obtained because the easily magnetizing directions are unified owing to the above-mentioned unique structure in the invention in claim 6 of the present application. Thus, the unit permanent magnets cannot be easily loosened and the permanent magnet ring can effectively function.

In light of these comments, Applicants respectfully submit that the Sakurai fails to disclose or suggest the presently claimed invention and is therefore incapable of properly supporting either a §102 or a §103 rejection. Applicants therefore respectfully submit that the presently amended claims are patentable over the Sakurai reference.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

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